# cycles

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DECEMBER 1961

cycles

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We report on cycles in data which cover 36 separate scientific fields. One of these fields is economics. Most of our members are seriously interested in economics, and current data are constantly and readily available.

However, you should be warned that a cycle projection is not an economic forecast. The projection is made so that the performance of the cycle can be followed.

If you engage in economic forecasting you need to know about cycles. But you *must also* evaluate all the other forces which, in addition to the cycles, work together to trigger changes in economic activity.

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# THE DIRECTOR'S LETTER

## ear Member:

## ew Publication Program

The magazine you are reading now is *Cycles* he official bulletin of the Foundation for Study of Cycles. The Foundation has had other publication—the *Journal of Cycle search*. The *Journal* will be discontinued h the October 1961 issue (Vol. 10, No. 4). magazine *Cycles* will be continued.

In the future, the *scientific* reporting of results of our research will be published the journals of the disciplines involved or the form of "separates" like those issued the Smithsonian Institution. Digests of se scientific papers will, of course, con- nue to be published in *Cycles*.

The main reason for discontinuing the *Jour- l of Cycle Research* is our desire to reach wider readership. Rhythmic fluctuation is a aracteristic of 36 different disciplines. An ticle in the *Journal of Cycle Research* might ncern itself with any of these, from Astron- y to Zoology. Only once in 36 times will ere be an article about cycles of bird abun- nce, for example. Very few ornithologists e so interested in cycles in general that ey will subscribe to a journal that treats eir own specialty only once every two or ree years. On the other hand, this same ticle published in the *Auk* will be read by ndreds of ornithologists. And so on for all e other disciplines.

A second reason is the matter of economy. e *Journal* is published at a loss. In our nsidered opinion, the good that comes of it n't worth the cost.

## rganization

When we were young and small we were gov- ned by a "Committee." This Committee con- sted of scientists and businessmen of dis- nction who were willing to lend their names our program. In addition, various scien- fic societies appointed advisors.

Later we supplemented our Committee by a regular Board of Directors. This Board meets quarterly on the second Friday of every February, May, August, and November.

This Board is assisted by Special Advisors. These are mostly laymen who have shown exceptional interest in the work of the Foundation, either by substantial financial contributions or otherwise. They receive special reports regarding the affairs of the Foundation. They attend Director's meetings when they are able; when not, they give their advice by mail.

A list of Special Advisors, Committee Members, and Directors is to be found on pages 312—316 of this issue.

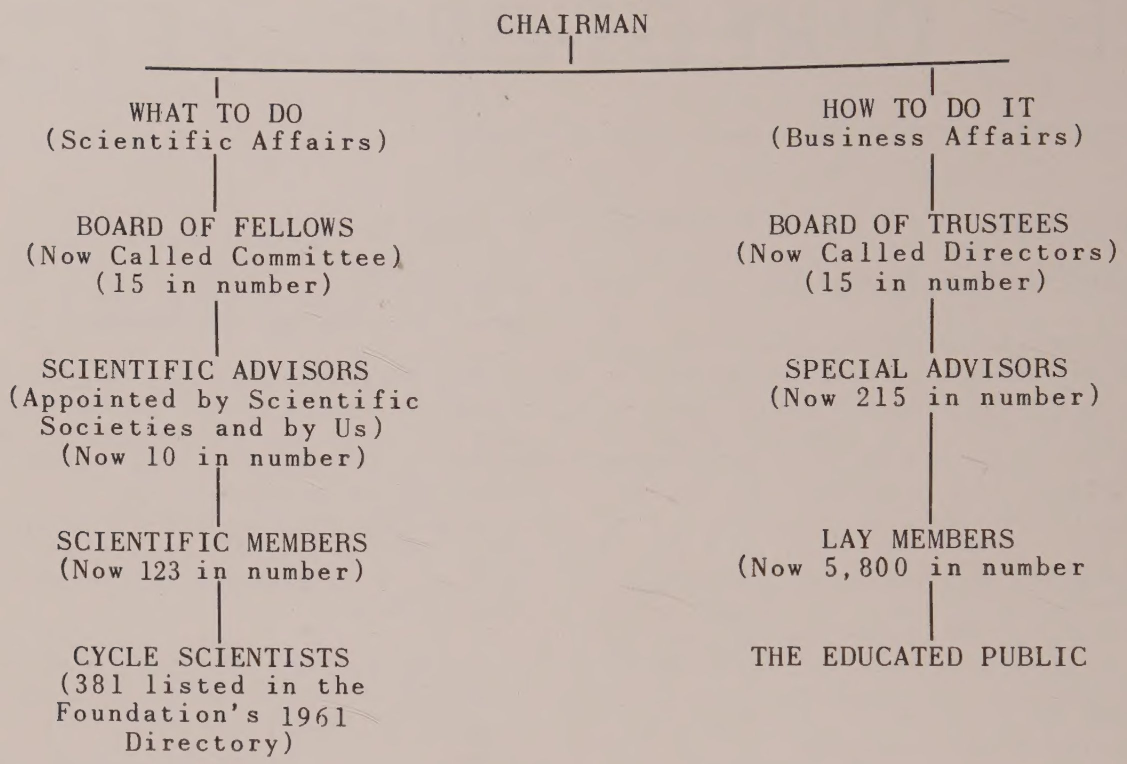
We are gradually dividing our administration into two parts. The lay or business matters are regulated by our Board of Directors with the help of our Special Advisors; the scientific matters are being guided by our Committee, aided by the Advisors appointed by the various scientific societies and other Scientific Advisors that we ourselves have or will appoint. The Scientific Advisors are chosen from our Scientific Members. These in turn are chosen from the larger body of some 380 living cycle scientists. (A list of these is contained in the Foundation's *Directory*, published in the October 1961 issue of the *Journal of Cycle Research*, and available for $1.)

This division of administrative responsibility is a commonplace among academic institutions and even with other institutions such as churches where lay matters are dealt with by "trustees," and ecclesiastical matters are managed by "deacons" or "elders." In our case there is no reason why a given individual cannot serve in both areas; several do.

Our organization chart is given on the next page, and it is followed by the list of Special Advisors, Committee Members, and Directors.

# THE FOUNDATION FOR THE STUDY OF CYCLES

## ORGANIZATION CHART



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I have not included any of our Scientific Advisors (except Committee Members) on the above list, as we are in the process of reorganizing the scientific part of our organization.

Cordially yours,
Edward R. Dewey
Director

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# NEW YORK CHAPTER DECEMBER MEETING

You are cordially invited to attend a dinner-meeting of the New York Chapter on Tuesday evening, December 12 (beginning with a social hour at 5:45 P.M.), in private rooms of the White Turkey Town House, 260 Madison Avenue, New York City. Dinner will be served at 6:30 P.M. The cost is $5.00 (cocktails and checkroom fee extra).

SPEAKER: Anthony Gaubis, President
Anthony Gaubis and Company
Investment Counselors

SUBJECT: *What Are the Time Cycle Indications for 1962?*

Mr. Gaubis has more than thirty years of experience in the field of forecasting. Since 1928 he has specialized in stock market a business cycle projections. He has served an economist and an investment counsel and an inveterate student of the timing of cycl in business and finance.

*Private tables*, seating four, six, eigh or ten, are available by advance arrangemen Such tables will be assigned in order of r ceipt of checks. All reservations should made by advance remittance to our Chapt Treasurer, Paul H. Halladin, 24 Oakview Av nue, Maplewood, New Jersey.

Jack A. Dorland
President, New York Chapter
Foundation for the Study of Cycl

# 'olcanic Eruptions:

## A METHOD OF TESTING FOR THE 9.25—YEAR CYCLE

BY LAWRENCE WARD

Some people have suggested a cyclic be-vior in volcanic eruptions. A cycle of about 1/4 years is one that has promise.

In many cyclic events, highs and lows ap-ar first in the two polar regions and pro-essively later equatorward. This behavior is lled *latitudinal passage of cycle epochs.* this shows up in volcanic eruptions, we ght very well suspect cycles in operation. iis, then, gives us a chance to test the ea of cycle behavior in volcanic activity.

If we plot volcanic eruptions by latitude id time, and if latitudinal passage is pres-it, the eruptions near the poles should come efore the eruptions near the equator.

"That's all right", you may say, "if the olcanos are kind enough to blow off one after he other. But what if they don't?"

We can get around this problem. If a cycle ulse is present, it will have occurred time fter time. It should therefore affect earlier ruptions just as those of today. After all, f it hasn't repeated, it is no cycle! We ould plot all the eruptions of the past on ne long piece of paper and see if they oc-urred at reasonably regular intervals. We ould also see if those nearer the poles oc-urred earlier. But we can condense the long iece of paper by simply adding intervals of he wave length being tested to each eruption. his addition would be repeated enough times o bring it down to current timing. If a vol-ano erupted in 1850, for example, and if we re testing a 9-year cycle length, we add nough nines to 1850 to bring it to a current ime, which would be 1958 or 1967. Thus, if a olcano blew two years after a cycle pulse ears ago, the relative relationship will be he same when we add the wave length to each, the timing of the pulse and the timing of the eruption. We don't know, of course, that there was a cycle pulse. But to be a cycle at all, the pulse had to keep on beating.

In the various encyclopedias, we dug up 40 volcanic eruptions of the past centuries. There are certainly many, many more that a regular project could dig up. But these seem representative. We took the first batch that we found. But the editors doubtlessly picked them for reasons of their own. The more violent the explosion, one may suppose, the more likely that it was picked. But it could be that those picked had the most publicity, or were near settlements, or had less competition in the news than those not picked. They may be the violent eruptions, which might only mean that the cork held until a pressure built up.

We have plotted these eruptions translated to a current calender time on a 9 1/4-year cycle basis (Table 1, Figure 1). Latitudinal passage will show up if present by later occurrence equatorward. Cycle behavior also means concentration at cycle timing. But how should we test this? One way is to locate the average position in the band (that is, the average timing at the average latitude). Because eruptions in the Southern Hemisphere that we have found are rather few and restricted in latitude, we have used only the 27 from the Northern Hemisphere in finding the average.

The average eruption in current timing is at 1952.95 of the calendar with an average latitude of 40.2°. Through this average of time and latitude, we pass a presumed passage line from 90° to 0° in both hemispheres. We compute this on the ratio of 90° passage = $\sqrt{1/2\ (\text{wave length})^2}$, which is about 6.54

years for a 9 1/4-year wave length. This would be a bit less than a month for each degree of latitude (about 70 miles). We don't know if there is such a passage or if this ratio is the proper one. More data would clarify this matter for sure.

For a timing of 1952.95 at 40.2° Latitude, the cycle pulse would start at the Poles on 1949.33 and reach the Equator on 1955.87.

We can apply a simple test of randomness to the 40 volcanic eruptions, all rendered in current time. If they fall at random (that is, no relationship to the 9 1/4-year wave length), they have equal opportunity to fall anywhere within any 9 1/4 years of the calendar. Hence, if we divide the 9 1/4 years into two parts, just as many should fall in one half as in the other. We will take for this test a 9 1/4 year period with one half centered upon this passage line and the other half not so centered. At random, there should be just as many in one part as in the other. We can count them in Figure 1. We do this and find that there are 30 in the centered half but only ten in the not centered half. In this diagram, we have indicated the eruptions falling within the centered half by solid circles, those in the other half by open circles.

If these 40 eruptions reflect volcanos a whole, it would appear that they are thr times as likely to occur in the half near t cycle pulse than in the half away from t pulse. They are not thereby erupting at ra dom. A cycle of about 9 1/4 years plays a pa of some kind. Clearly, this is a matter wor real investigation, much more than we ha done here.

We tested the possible association of eru tions with geomagnetic latitude by doing t job all over again using geomagnetic inste of geographic latitude. The results were 21 the centered half and 19 in the not center half. If this also reflects things as they a in nature, geomagnetic behavior is not i volved. (It might be noted that with few e ceptions, latitudinal passage in other ph nomena show greater association with geograp ic than with geomagnetic latitude.)

Forty eruptions are not enough to demo strate a 9 1/4-year cycle in volcanic eru tions. But their behavior certainly is provo ative. That this subject warrants a ful fledged investigation, we feel certain. earthquakes are somehow supposed to be relat to volcanic behavior, maybe there could be cycle influence there too.

Table 1

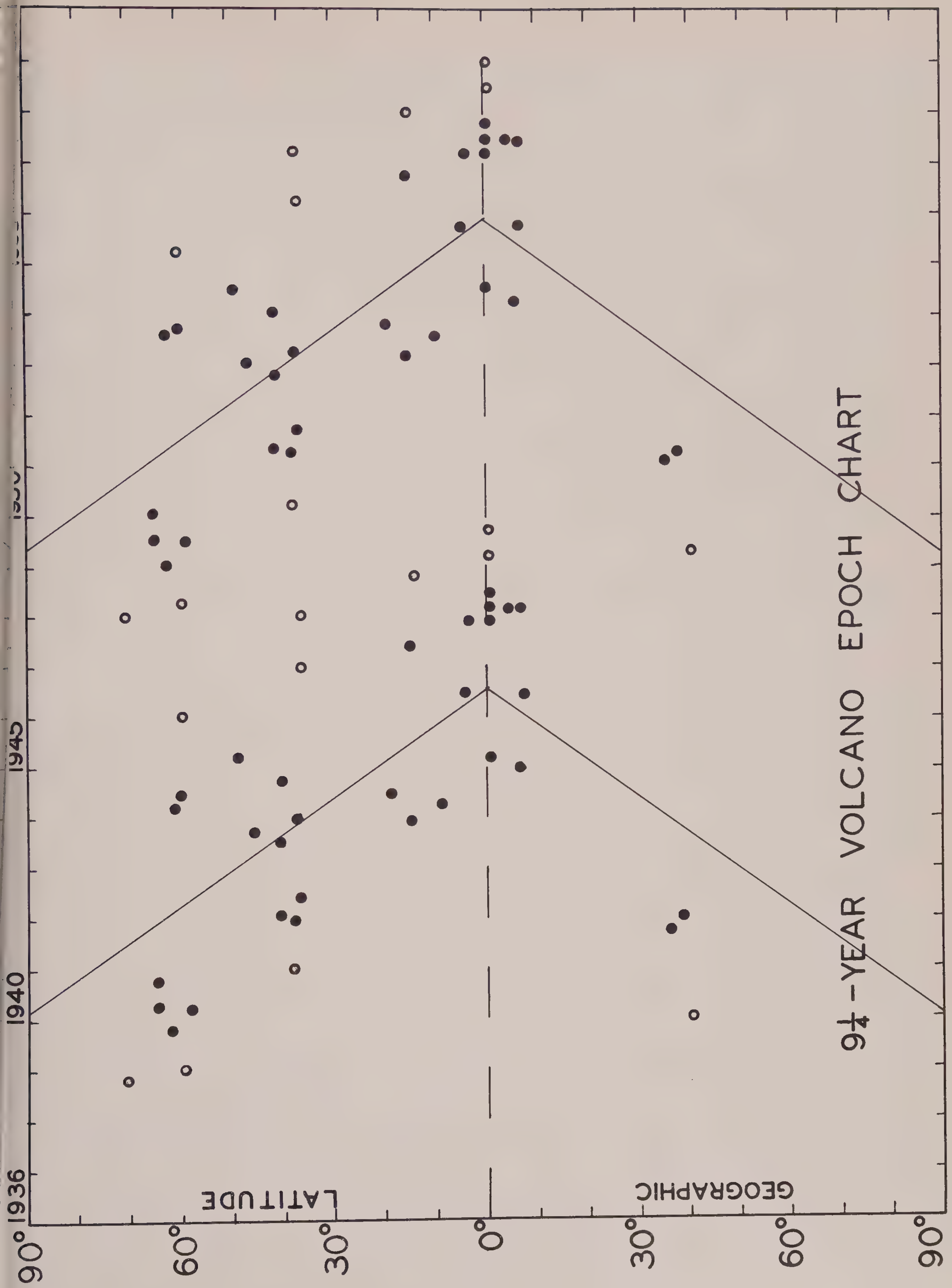
Volcanic Eruptions

| Volcanic Eruption | Time of Eruption | Current Calendar Time as of 9¼ Years | Geographic Latitude |
|---|---|---|---|
| Jan Mayen | 1818 | 1940.00 | 71 °N |
| Loki, Iceland | 1783 | 1950.00 | 65 °N |
| Vatns, Jokull | 1875 | 1949.50 | 64.5°N |
| Mt. Wrangell | 1819 | 1949.00 | 62.1°N |
| Mt. Spurr | 1953 | 1953.50 | 61.3°N |
| Bagoslauf Island | 1796 | 1953.75 | 60 °N |
| " " | 1883 | 1948.25 | 60 °N |
| " " | 1890 | 1955.25 | 60 °N |
| Mt. Katmai | 1912 | 1949.50 | 58.3°N |
| Mt. Boker | 1843 | 1954.50 | 48 °N |
| Mt. St. Helens | 1841 | 1953.00 | 46.2°N |
| Mt. Vesuvius | 1898 | 1954.00 | 40.8°N |
| " " | 1906 | 1952.75 | 40.8°N |
| Mt. Lassen | 1914 | 1951.37 | 40.5°N |
| Azores | 1811 | 1950.25 | 38.5°N |
| Mt. Etan | 1886 | 1951.25 | 37.7°N |
| " | 1892 | 1957.25 | 37.7°N |
| Sicilian Straits | 1831 | 1951.75 | 37 °N |
| Kobandai | 1888 | 1953.25 | 37 °N |
| Panpellari | 1891 | 1956.25 | 36.9°N |

Table 1

Volcanic Eruptions

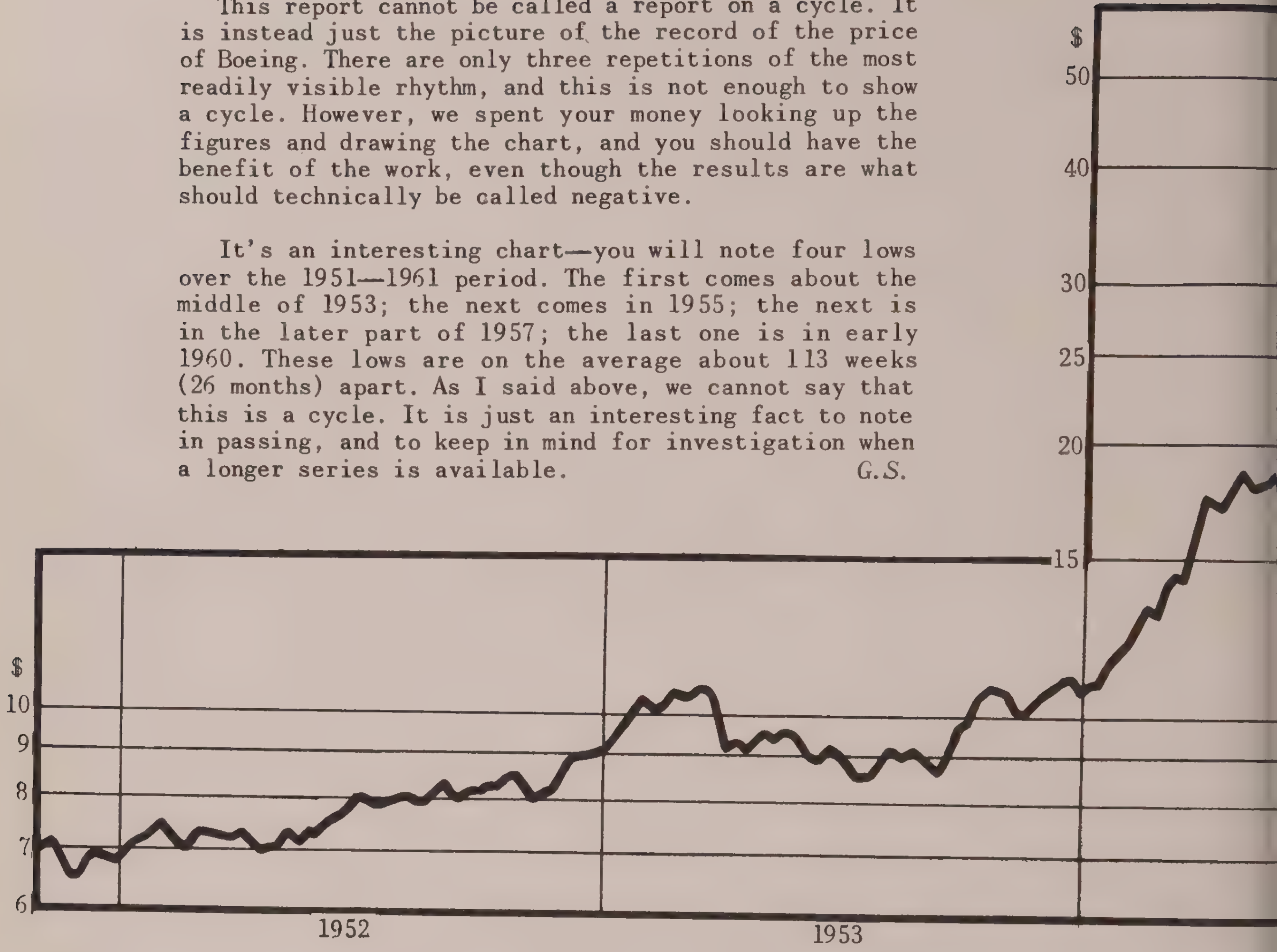
| Volcanic Eruption | Time of Eruption | Current Calendar Time as of 9¼ Years | Geograph Latitude |
|---|---|---|---|
| Jorulla | 1759 | 1953.75 | 18.9°N |
| Mt. Pelee | 1762 | 1956.75 | 14.8°N |
| " | 1762 | 1956.75 | 14.8°N |
| " | 1851 | 1953.25 | 14.8°N |
| Hibok-Hibok | 1953 | 1953.50 | 9 °N |
| Cameroon Peak | 1909 | 1955.75 | 4.2°N |
| Awoe | 1892 | 1953.50 | 3.7°N |
| Cotapaxi | 1532-3 | 1958.50 | 0.8°S |
| " | 1698 | 1957.50 | 0.8°S |
| " | 1744 | 1957.25 | 0.8°S |
| " | 1855-6 | 1957.75 | 0.8°S |
| " | 1880 | 1954.50 | 0.8°S |
| " | 1903 | 1959.00 | 0.8°S |
| Krakatau | 1882 | 1957.50 | 6 °S |
| Tambora | 1815 | 1954.25 | 6 °S |
| Pompondayang | 1772 | 1957.50 | 6 °S |
| Merapi | 1872 | 1955.57 | 7.5°S |
| Quizapu | 1932 | 1951.00 | 35.6°S |
| Tarawa | 1886 | 1951.25 | 38.2°S |
| Southern Andes | 1921 | 1949.25 | 40 °S |

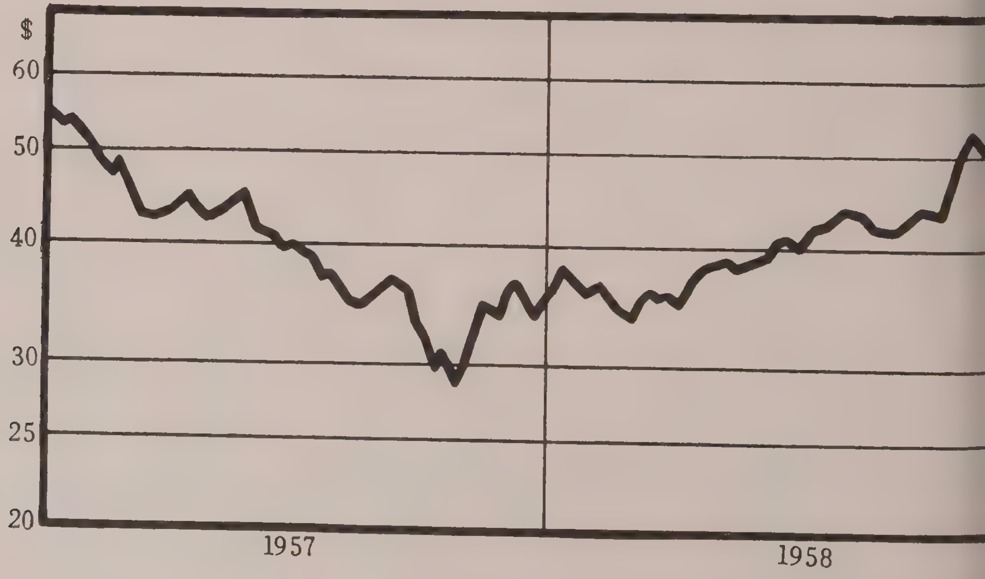

9¼-YEAR VOLCANO EPOCH CHART
GEOGRAPHIC
LATITUDE
90°
60°
30°
0°
30°
60°
90°
1936
1940
1945

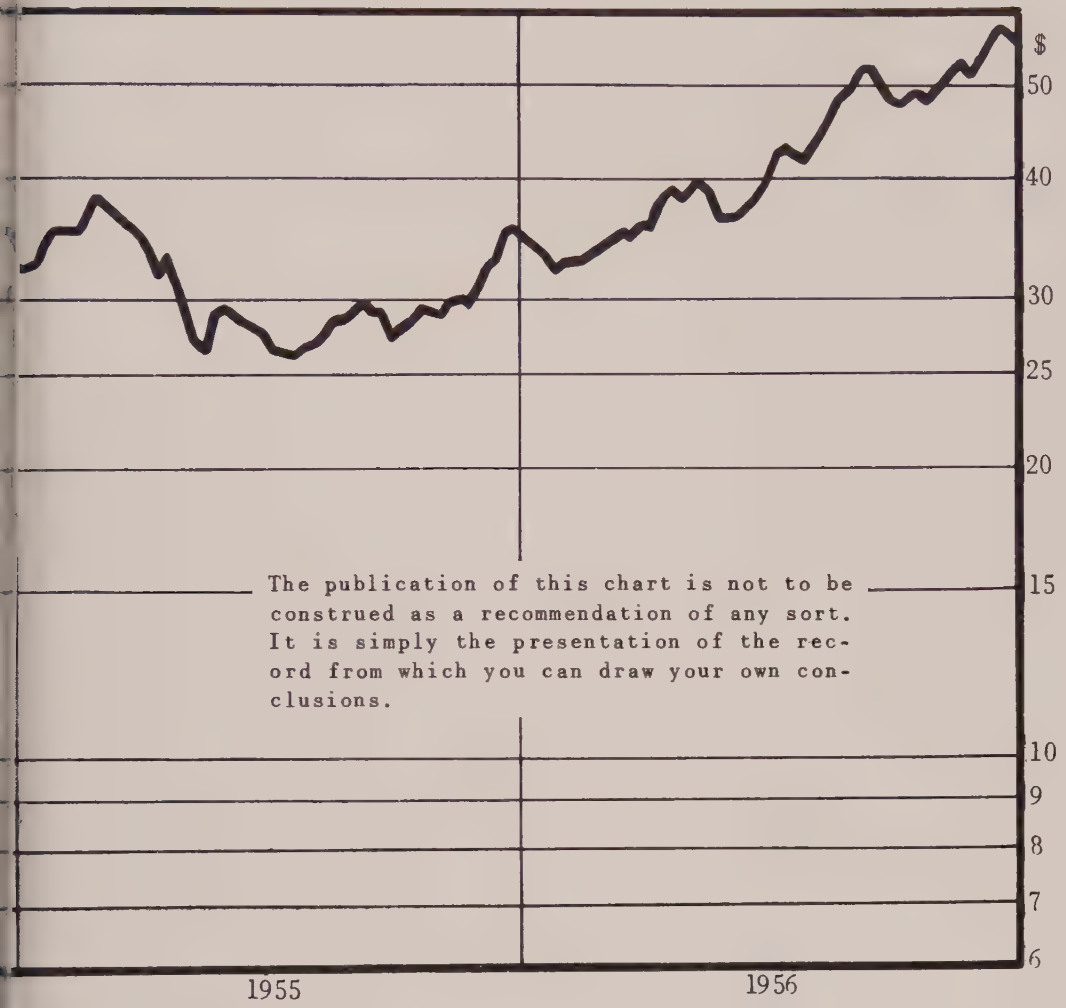
# THE RECORD OF BOEING STOCK

This report cannot be called a report on a cycle. It is instead just the picture of the record of the price of Boeing. There are only three repetitions of the most readily visible rhythm, and this is not enough to show a cycle. However, we spent your money looking up the figures and drawing the chart, and you should have the benefit of the work, even though the results are what should technically be called negative.

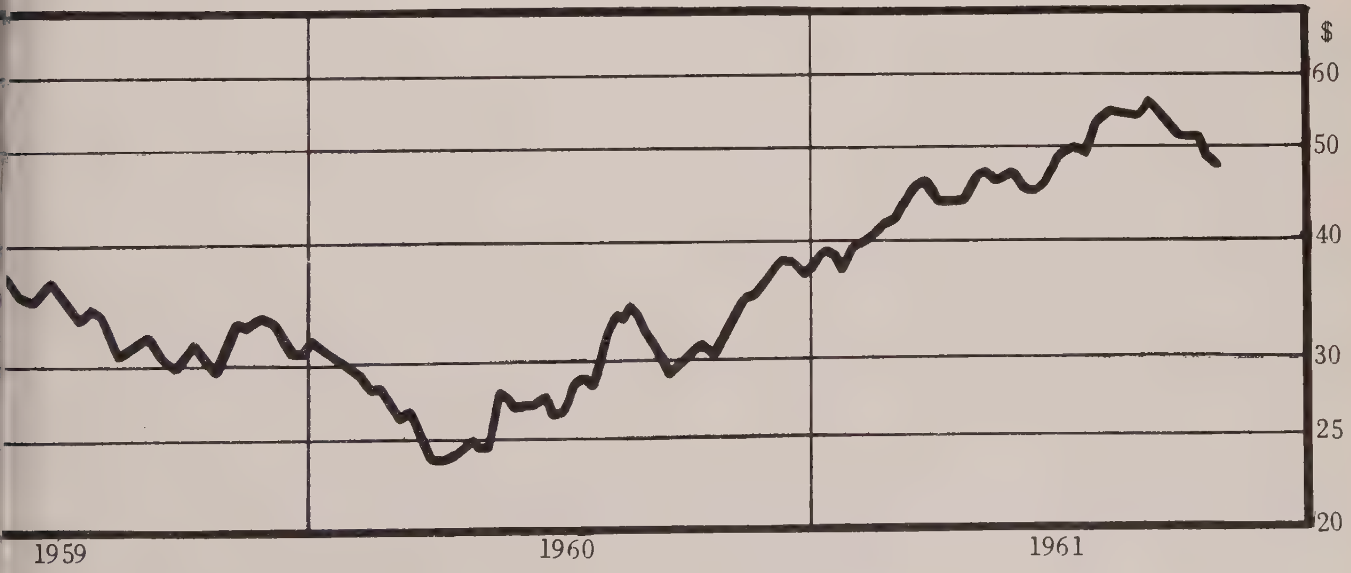
It's an interesting chart—you will note four lows over the 1951—1961 period. The first comes about the middle of 1953; the next comes in 1955; the next is in the later part of 1957; the last one is in early 1960. These lows are on the average about 113 weeks (26 months) apart. As I said above, we cannot say that this is a cycle. It is just an interesting fact to note in passing, and to keep in mind for investigation when a longer series is available. *G.S.*







The publication of this chart is not to be construed as a recommendation of any sort. It is simply the presentation of the record from which you can draw your own conclusions.



# Time and time again . . .

BY GUSTAV GUMPERT

## Dream Time

Dreaming is a matter of cycles and sleep rhythms, not of temperament. This has been found by scientists who have been studying dreams at the University of Chicago and at the New York Downstate Medical Center in Brooklyn.

Researchers found that every adult follows a basic sleep pattern and dreams about the same length of time every night. They say that dreaming occurs only in light sleep and that such sleep occurs with a nearly invariable rhythm.

First we have deep sleep for 30 minutes. Then we make a rising approach to our lightest phase of sleep and reach it about 70 minutes after falling asleep. This first dream period lasts for an average of 9 minutes, followed by deep sleep again. Toward the middle of the third hour we have 19 more minutes of dreaming; a little later 24 minutes; then 28 minutes more toward the onset of the seventh hour. After this, there is a half-hour of medium sleep, and then we drift upward once more and dream until we awake.

## Lesson from the Trees

If what scientists can learn from tree rings is to be trusted, the Central Pacific Coast region of the U. S. is in for a big drought—beginning in the year 2010.

Kenneth McLeod of Klamath Falls, Oregon, a scientifically trained forester and naturalist, has found a cycle in California tree rings that convinces him the year 2010 pinpoints the beginning of a great drought.

## Cancer and Sun-Spots

J. H. Douglas Webster, in an article in the *British Medical Journal*, claims that both influenza outbreaks and the occurrence of cancer are related to a 33-week cycle of sun-spots.

Now that the virus theory for the cause of cancer has acquired a more respectable scientific position, it is possible to theorize, along with Webster, that viruses are more current at certain times than at others. This being so, and if cancer is in fact caused—at least in part—by a virus, we would naturally expect to see a cycle in cancer.

## Sense and Nonsense

Those who study cycles are sometimes appalled by the difficulty of "proving" anythin at all. It is possible, for example, to tak two cycle series, both having peaks ever seven years, and then to suggest that the tw series must have a common cause.

When the series being compared consist of say, the price of bananas in Peru and th productivity of Welsh hens, it is downrigh embarrassing to be asked to believe that the have a common cause. Yet they may seem to b exactly similar.

What to do? In a highly technical mathematical treatment of this subject (*Why Do W Sometimes Get Nonsense-Correlations Betwee Time-Series?*), G. Udny Yule, C. B. E., M. A. F. R. S., may have found the answer. Withou going into impossibly complex details, we ca report that Mr. Yule believes that series making a certain kind of line when plotted on graph can be correlated while others can not

With the use of the newer electronic brains it is now possible to reach the same conclusions without the tremendous labor of calculation. But we should still bear in mind Mr Yule's findings: that similar series do no necessarily imply a common cause.

## Ozone and Ambition

In a brilliant paper (*Climatic Pulsation and an Ozone Hypothesis of Libraries and History*), Ellsworth Huntington has shown that the amount of ozone in the air may have a goo deal to do with the course of history.

Here is his theory in a nutshell: "According to the ozone hypothesis, variations i solar activity give rise to variations i storminess, and hence in the degree to whic waves of ozone sweep outward from polar regions, or are produced in the rain and wind of storms. Hence, during periods of maximu solar activity the stimulating quality of th weather tends to increase. This increase presumably takes place all over the world. . ."

Maybe the world has a little too much ozon right now—judging by international events.

# ETTERS:

## ggestions

ar Mr. Dewey:

I would like to suggest that the monthly ports be three-hole punched so that they can inserted in a loose leaf binder.

aker Heights, Ohio S. W. Goodman

*mment:* This suggestion has been made by sev-al people, and we are tempted to follow it. e punch our reference copies.) The reason at we do not punch the copies is that some eople don't want them punched, and they can-ot *un*punch them. G.S.

* * *

ear Mr. Dewey:

The monthly reports on the Geisinger Indi-ator are fine with one exception. The date f the report is buried down in the center of e sheet. In my opinion it would be better if t were at the top of the sheet and centered.

etroit, Michigan D. T. Hasting

* * *

ear Sirs:

It might take up too much space, or there ight be some other reason why you might not ike the idea, but it would be most helpful to e if you could publish the figures that back-p the charts of Carrier, Westinghouse, etc.

ittsburgh, Penna. A.O.

*omment:* We'll try. G.S.

## A Request

Dear Sir:

I would like to correspond with readers interested in a "spherical coordinate" system of cycle analysis, the mathematics involved, and the philosophical implications of the concept. A preliminary outline of my own ideas along these lines will be sent on request. My address is 2750 West Chicago Avenue.

Chicago, Illinois Addison Brown

## Growth Trends

Dear Mr. Dewey:

I was very much interested in your reprint from the book *Today and Destiny* by Edwin F. Dakin. During the past few years students of population trends have pointed to the alarming and rapid increases in world population. Some of them have gone so far as to predict that in less than a century there will only be standing room on our globe.

None of these predictions seem to take account of the theory of Dr. Raymond Pearl in respect to the eventual leveling out of population growth. For example, his chart of our population growth indicated a leveling out in the United States that's slightly under two hundred million.

What do you think about this and what do you think total world population will be before the leveling out process begins? How much weight do you think can be given to Pearl's theory?

Cincinnati, Ohio W. H. M.

*Comment:* Once a basic underlying growth trend has been established, it will continue along the lines described by Pearl according to the law of growth, *unless there are revolutionary changes in the constitution or behavior of the organism or in the nature of its environment.*

If such a revolutionary change does occur, it does not change the *law of growth.* What changes is the basic curve to which the law must then be reapplied. The conclusions and forecasts would change, but only because the curve is changed. The same basic law would be used to arrive at revised forecasts.

A change in a growth trend can only be the result of really revolutionary changes. The great advances in medicine coupled with the lack of birth control have apparently brought about a change in the basic birth/death ratios.

I do not have the figures on the world population on hand. But the United States population now has a greatly raised upper limit brought about by the 1950—1960 increase in population. The timing and level of this upper limit will vary according to the person working on the curve, but I know of no competent and erudite statistician who would project a growth curve on population and not rely on Pearl's work.

With respect to the upper limits of world population based on the recent burst in the figures, I imagine that it is alarmingly high, and I think that with regard to the possible future population, the world is in trouble—particularly in view of the fact that we seem to have trouble feeding all the people on the planet now. E.R.D.

## Berlin

Dear Mr. Dewey:
I was much impressed with the September issue—particularly the Mistakes 1—15.

Cleveland, Ohio R. H. Gries

* * *

Dear Mr. Dewey:
Your "Director's Letter" in the September issue apropos Berlin is one of the best that I have ever read. I only wish that more people, particularly in higher places, could have an opportunity to read your article.

Scranton, Pennsylvania W. W. Manville

* * *

Dear Mr. Dewey:
You are to be congratulated on the letter on the Berlin issue. This is a forthright, astute, and comprehensive job; it takes what is not now a very popular position, and it does so with an effectiveness that I have not encountered elsewhere. This letter should have a broad airing; I hope that members will noise it around after digesting it.

Montpelier, Vermont C.V.P.

*Comment:* All these kind letters are very heart warming, but I'm not sure they are deserved.

I hold no brief for the solution suggested. I included it merely to end the story on a positive note. Some other solution might be much better.

The article will have served its purpose if it gets people to thinking—and helps to prevent more mistakes in the future. E.R.D.

## A New Idea

Dear Mr. Dewey:
The reprint from *Today and Destiny* in th October issue is the kind of article I like t see appearing in *Cycles*. It should help u attain some greater degree of understanding, clearer realization of our individual and collective inherent limitations.

I want to comment on the paragraph on pag 16 of the January 1960 issue of *Cycles* unde the heading "Cycles in the Universe." D Sandage, in his theory of an alternately expanding and contracting Universe, is not to far from the truth. This Universe *is* contracting and expanding, in fact doing both at th same *time*, though not in the same *place*, according to my theory. A two phase circuit i present, one having two sides. In one of thes energy is contracting into mass as it must for on this side, energy is being diffused i all directions radially from a central poin and so must necessarily decelerate. On th other side of the circuit the opposite mus necessarily take place—mass accelerate int energy—in order to keep the process going. I order, that is, to prevent the "system" fro emptying itself in one direction or the other

(Theorists so far have failed) to recogniz that acceleration of mass imposes a tensil load upon it, and deceleration a compressiv load. They *see* the acceleration going on, an the results—the separation of nebulae at a increasing rate with increasing distance i all directions—but fail to recognize tha such must *appear* to be the case in all directions from any point on the accelerating sid of any universe, just as the opposite woul appear to be the case from any point on th other side of such circuit. We must therefor presently be located somewhere on the accelerating side of one of the innumerable radiall disposed, elliptically shaped Universe circuits.

The Universe is not expanding, or contracting, for that matter, at a slower rate tha formerly, as the article states astronomer are attempting to determine. It is doing neither in totality, *i.e.*, in an absolute or permanent sense. . .being only the Universe example of the working of the law which state that there has to be two sides, aspects, form expressions or what you will, to everything Furthermore, even this process is cyclic.

Toronto, Ontario W. N. Milla

# The Cycle Workshop

## The Time Chart
## Part 3

So far in this continuous series of articles I have talked a little about charts and harting, about ratio scales and logarithms, and about getting hints of cycles. Under the general heading of "Getting Hints of Cycles" I described the methods of inspection, pencils, thumbing, counting, the graduated scale, and the time chart.

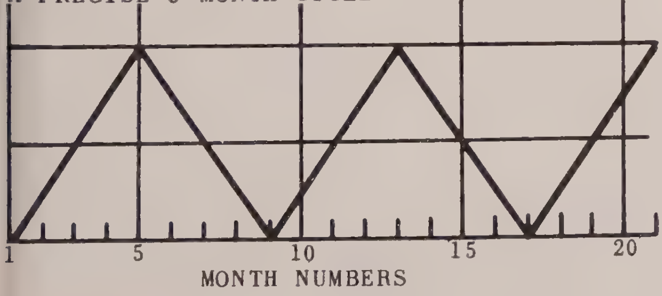
In the early stages of a project we rely heavily on graduated scales. If there is any hint in the data of a cycle you can usually see it by an inspection with graduated scales. The routine you follow goes something like this: first you line up the data. You have to have a homogeneous series and sometimes extra work is necessary to achieve this. That is, you have to splice series together, or convert earlier figures to a later basis, or make some adjustment so that the time series represents the same thing on the same basis over the entire period it covers.

When you get a series complete, then you plot the figures on semi-log paper, or you plot the logs of the data on arithmetic paper. When we get a picture of the series, we examine it with graduated scales. This may give us enough of an answer so that we can go on to the next step. Sometimes we make time charts of the chart of the logs of the data to clarify possible lengths.

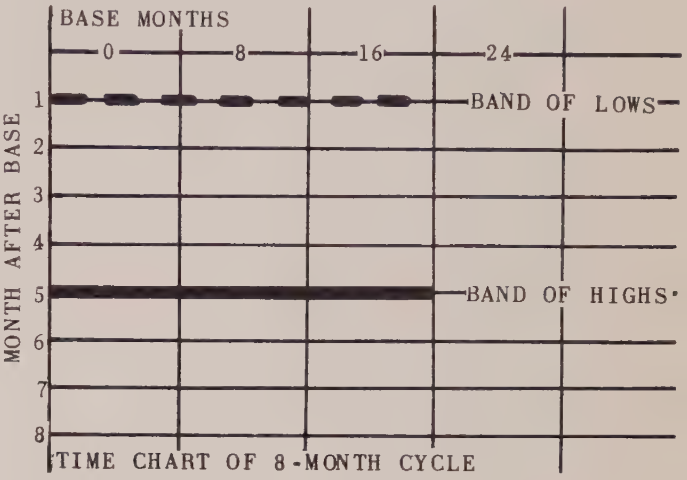
But this early stage of the work is not the only place that time charts are used. There are many places throughout a project where a time chart will be useful.

In the example we used last month—temperature highs at San Francisco—we plotted the highs on a time chart grid. It is usual to plot *both* the highs and the lows of a curve on a time chart. To clarify the time chart idea, let's consider a simple zigzag ideal cycle.

A PRECISE 8-MONTH CYCLE



This wave is 8 months long, four months up and four months down. If you make an 8 month time chart grid, you will have highs at month number 5, 13, and 21. Lows will come at months number 1, 9, 17, and 25. On a time chart grid the wave looks like this.

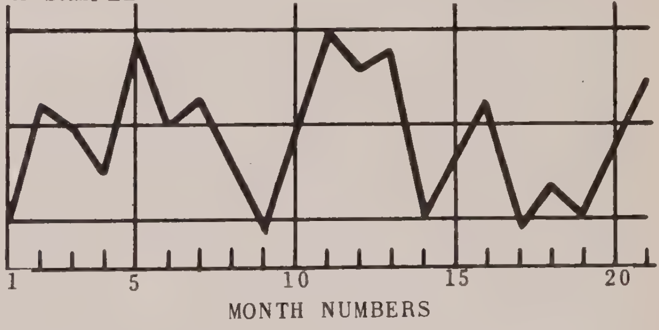


TIME CHART OF 8-MONTH CYCLE

The picture diagrams a horizontal line for successive highs and another horizontal line for successive lows. This is a sophisticated way of picturing what you could, in this instance, achieve by simply counting. But this illustration is the most elementary case you could meet.

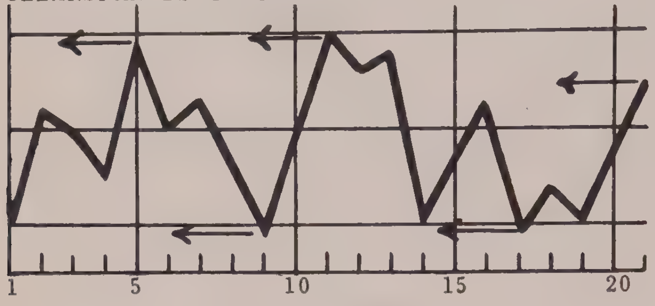
As the usual chart is so much more complicated you need an additional tool to help you construct a time chart of a given length. The tool you use is called clearspan. Look at this chart.

A SAMPLE CHART OF POSSIBLE 8-MONTH CYCLE



There are a lot of peaks and valleys. How are you going to know which ones to select—how can you make an impartial selection? There is a rule to solve this dilemma. If the peak spans a clear area of at least ½ the wave length in question, and it is the highest peak after the previous low, and before the next low, it is noted on the time chart. The same rule applies to the lows. The chart above is repeated here with the selected highs and lows marked off.

SELECTION OF 8-MONTH HIGHS AND LOWS
CLEARSPAN IS 4 MONTHS



If you are looking for a wave 16 items long, the span should be 8. If you are looking for a wave 20 units long the span should be 10. If there are a lot of random looking wiggles that seem at first glance to have no rhythm you can with this tool separate out any possible rhythms. Of course, *all* the wiggles may be random, but if some are higher and lower, with the proper clearspan and if these repeat with a beat, the time chart will show you.

The idea of clearspan is the basic concept behind the time chart.

Clearspan can be figured on the figures themselves. That is, you don't *have* to draw a chart of the data in order to make a time chart of it. If you are working with a chart, you can mark off the clearspan with nicks on a card and slide the card along the chart as you note the highs and lows on the time chart.

If you want to make a time chart from the data (skipping drawing the chart,) you put in a column of clearspan numbers. If a given figure has a value greater than the point immediately before it, the clearspan is indicated by a black number. If the given point is below the one next preceding, the clearspan is indicated by a red number. When the value of a point is exactly equal to the value of the point immediadely before it, the clearspan value is zero. You count only the number of points in time that your values are over or under the preceding values.

The following table illustrates the counting of clearspan numbers.

Values and Clearspan Numbers of Imaginary Data
(Red Values Indicated by Minus Sign)

| Year | Value | Clearspan Numbers | Year | Value | Clearspan Numbers |
|---|---|---|---|---|---|
| 1900 | - | - | 1917 | 750 | -1 |
| 1901 | 100 | - | 1918 | 650 | -6 |
| 1902 | 400 | 1 | 1919 | 700 | 1 |
| 1903 | 800 | 2 | 1920 | 850 | 3 |
| 1904 | 700 | -1 | 1921 | 850 | -0 |
| 1905 | 600 | -2 | 1922 | 500 | -10 |
| 1906 | 500 | -3 | 1923 | 550 | 1 |
| 1907 | 600 | 1 | 1924 | 600 | 2 |
| 1908 | 400 | -5 | 1925 | 900 | 8 |
| 1909 | 300 | -7 | 1926 | 800 | -1 |
| 1910 | 200 | -8 | 1927 | 700 | -2 |
| 1911 | 400 | 2 | 1928 | 50 | -27 |
| 1912 | 900 | 11 | 1929 | 200 | 1 |
| 1913 | 1,000 | 12 | 1930 | 250 | 2 |
| 1914 | 750 | -2 | 1931 | 200 | -1 |
| 1915 | 700 | -3 | 1932 | 100 | -3 |
| 1916 | 900 | 2 | | | |

The clearspan can be obtained easily from numerical data. This is done as follows: First notice if the value of the point for which the clearspan is being computed is over or under the value of the next preceding point. If it is above, the clearspan will be recorded in black. If below, in red. The numerical value of the clearspan will be the number of points *back to a value as high or higher*, less one, *or as low or lower*, less one, as the case may be. Thus the clearspan of the point at year 1920 is found by counting the years backward until one finds the first number with a value as great as or greater than 850, and subtracting 1. In this case, you must go back four years to 1916 to get a value as high or higher than 850. The number of the clearspan is therefore 4 less 1, or 3, recorded in black. Again, the clearspan of the point at year 1922 is 11 less 1, or 10, recorded in red.

If the points are numbered consecutively, as they are when the data are annual, you do not need to count—you can subtract. Thus, to get the clearspan of 1922 (value 500), you scan the value column (without counting) until you reach a value as low or lower than 500. You look for values *as low or lower* because the value for 1922 is *below* the value for 1921. Having found the value sought, you notice that it is at year 1911. Subtract 1911 from 1922; the difference is 11. Subtract 1 to get the clearspan of 10; record it in red. (In practice, of course, you subtract the year *after* 1911, namely 1912, from 1922, and obtain 10 directly). The clearspan values tell you what dates to enter on the time chart.

*E. R. D.*

# the december CYCLES round-up

The Round-Up gives you the chance to look over our shoulder as we constantly check on the way the current data match the cycles as they were projected sometime in the past.

This month's review includes

The Eight Leading Indicators (see below)

Wheat and Egg Prices (Page 328)

Carrier Stock Prices and Shoe Production (Page 329)

Corn Prices and Automobile Factory Sales (Page 330)

Oats Prices and Cotton Consumption (Page 331)

In addition, I want to include the record of sunspot numbers for recent months for those of you who follow sunspots. The 1961 record of Zurich Provisional Sunspot Numbers follows:

| | | | | | |
|---|---|---|---|---|---|
| Jan | 53 | Apr | 62 | Jul | 69 |
| Feb | 43 | May | 50 | Aug | 52 |
| Mar | 51 | Jun | 78 | Sep | 64 |

The last year of sunspot high was 1957, when the monthly figures averaged 189.7 for the year. The average for the year 1960 was 109.2. The first nine months of 1961, recorded above, average 58.

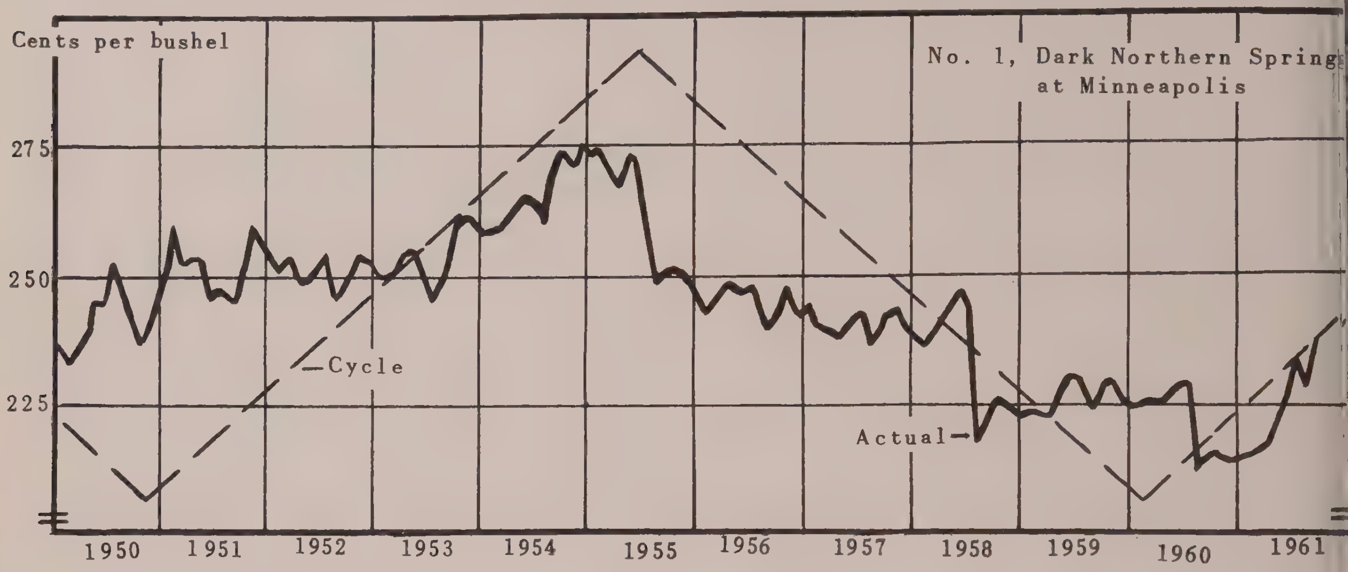
## LEADING INDICATORS

| Leading Indicator | Latest Month | Change from Previous Month | Change from Same Month Last Year | October 25 Status |
|---|---|---|---|---|
| New Orders for Durable Goods | $15.56 billion (for August) | (Same figure as used last month; no later figure is available yet.) | | |
| Wholesale Prices - 22 Commodities (1947-49 = 100) | 84.6 (for September) | Down | Up | Neutral |
| Number of New Incorporations (from Dun & Bradstreet, seasonally adjusted) | 15,873 (for August) | (Same figure as used last month; no later figure is available yet.) | | |
| Liabilities of Failures (from Dun & Bradstreet) | $116.6 million (for September) | Up | Up | Poor |
| Residential Building Contracts (from F. W. Dodge Corp.) | $1,589 million (for August) | Up | Up | Good |
| Nonresidential Building Contracts (from F. W. Dodge Corp.) | $1,087 million (for August) | Down | Down | Neutral |
| Hours Worked in Manufacturing | 39.6 hours (for September) | Down | No Change | Poor |
| Stock Prices: | | | | |
| Dow-Jones Industrials Average | 711.02 | Down | Up | Neutral |
| Standard & Poor's Combined Index (1947-49 =10) | 67.26 | Down | Up | |

# WHEAT PRICES

The 9.3-year cycle in the price of wheat is now on the way up to a high due, on the average, about October 1964. There have been ten up-legs of this cycle in wheat prices since 1866 when our data start. Based on the record of actual wheat prices during these past up-legs of the cycle, the odds are 4 to 1 tha the price of wheat at October 1964 will b above the price at February 1960. (Februar 1960 being the time of the most recent idea low.) The price of wheat during September wa 238 cents per bushel.

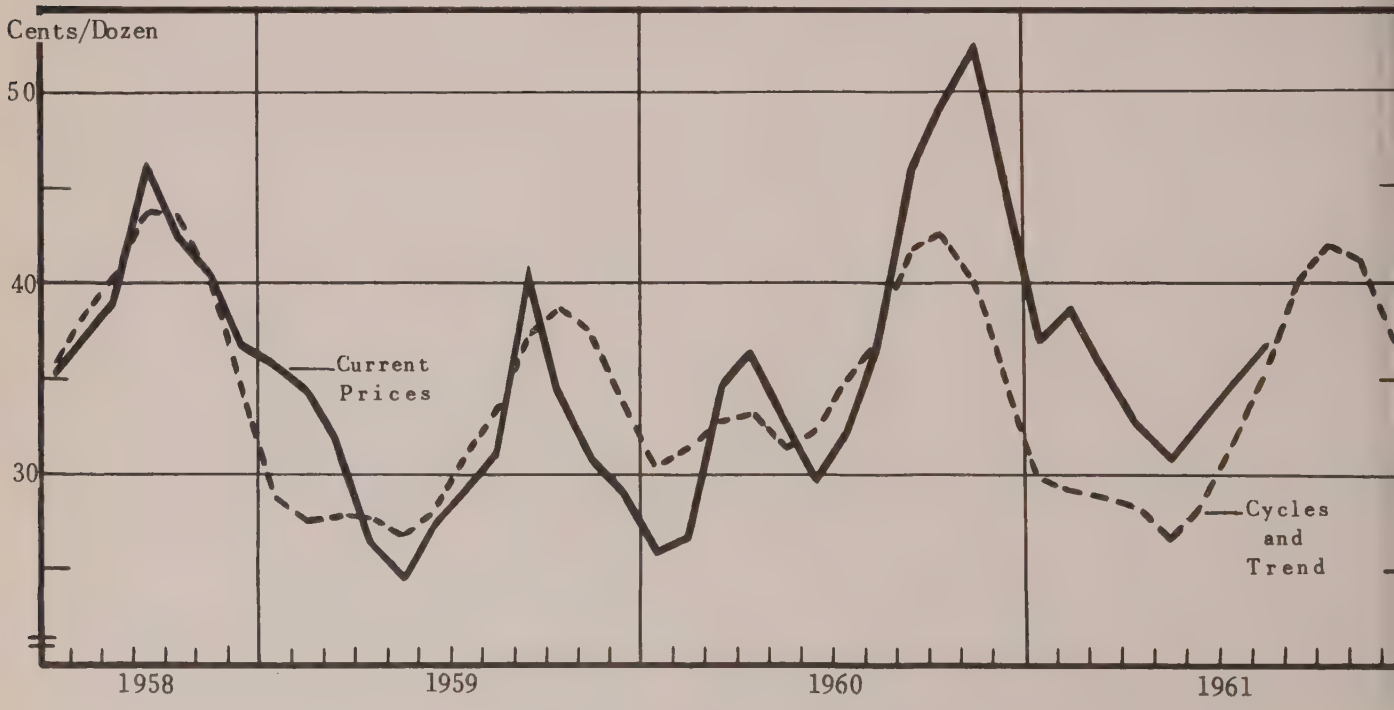
*G.S*



# EGG PRICES

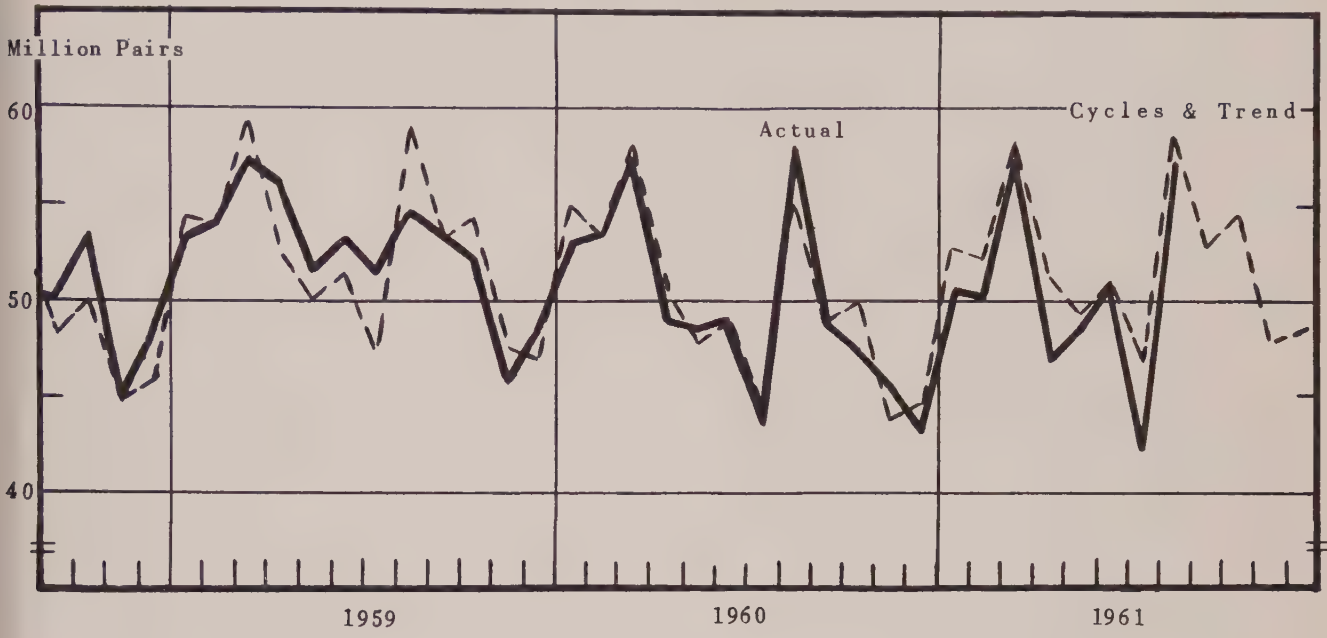
The 12-month cycle in egg prices has a high on the average, at October. In addition to the 12-month cycle, the broken line on the chart includes a 26.5-month cycle, and an assumed trend. The ideal 26.5-month cycle had a low at May of this year, and is now on the way up t a high due, on the average, at June of 1962

The wholesale price of eggs at Chicago during August averaged 36.6 cents per dozen.



# SHOE PRODUCTION

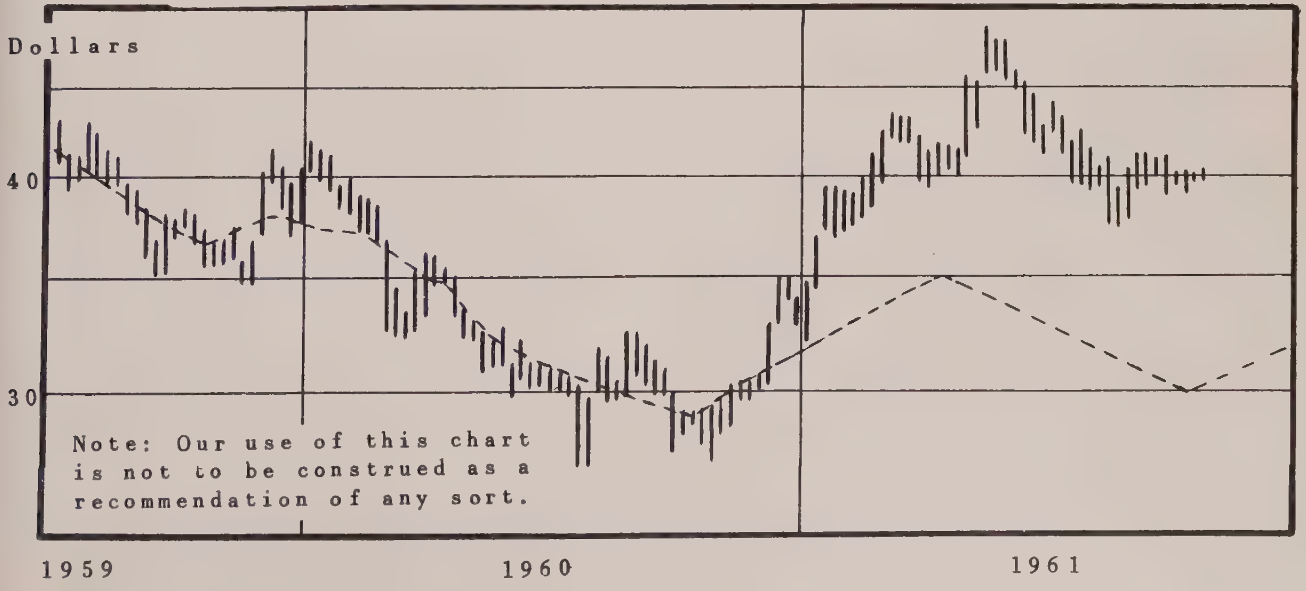
Shoe production normally dips in July, and oes up in August. This behavior is part of he seasonal pattern which has peaks in March nd August with dips in-between. In addition o the seasonal pattern, the broken line on the chart includes a 27-month cycle, and an underlying trend. The ideal 27-month cycle is now on the way up to a peak due, on the average at January 1962. In August there were a total of 57 million pairs of shoes produced.



# CARRIER STOCK PRICES

The broken line on the chart shows a yearly cycle combined with an assumed underlying trend. The yearly cycle has had, on the average since 1951, a high at about the 16th week of the year, and a low at the 42nd week of the year. Please remember our repeated warning that these highs and lows are *cycle* highs and lows, and *not* price highs and lows. Many factors in addition to this lone cycle will work together to make the actual price at any time.

The last plot on the chart is for the week ending October 27.

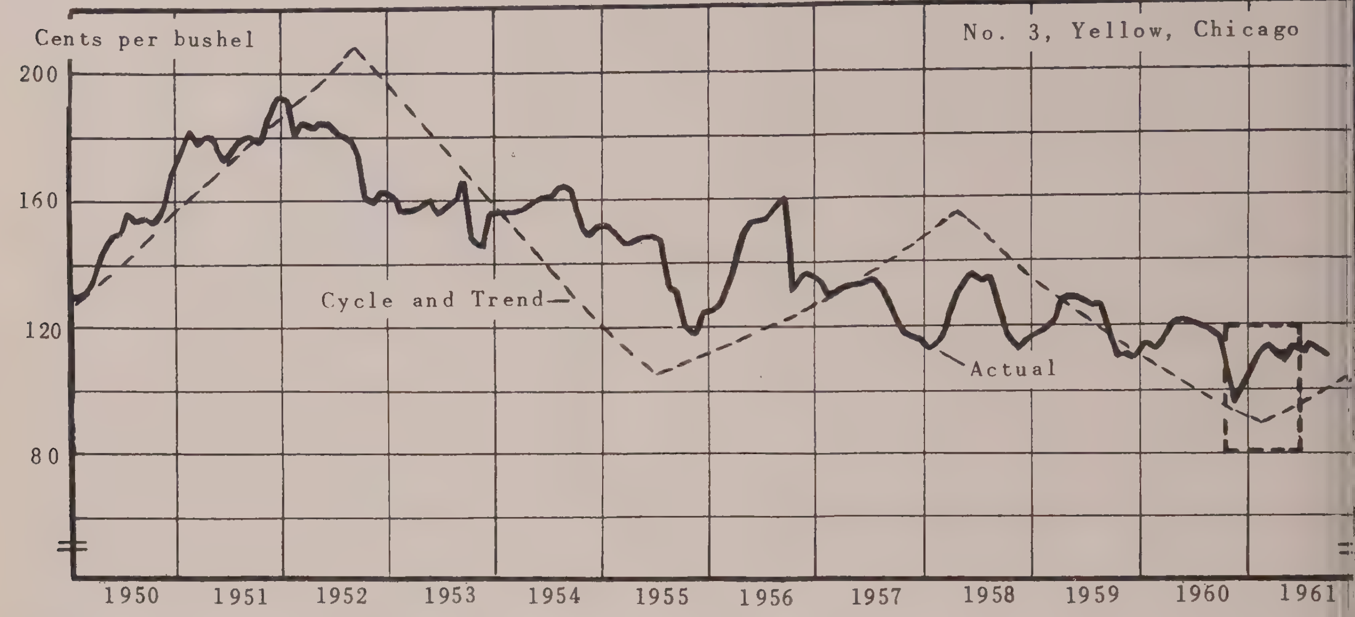


Note: Our use of this chart is not to be construed as a recommendation of any sort.

# CORN PRICES

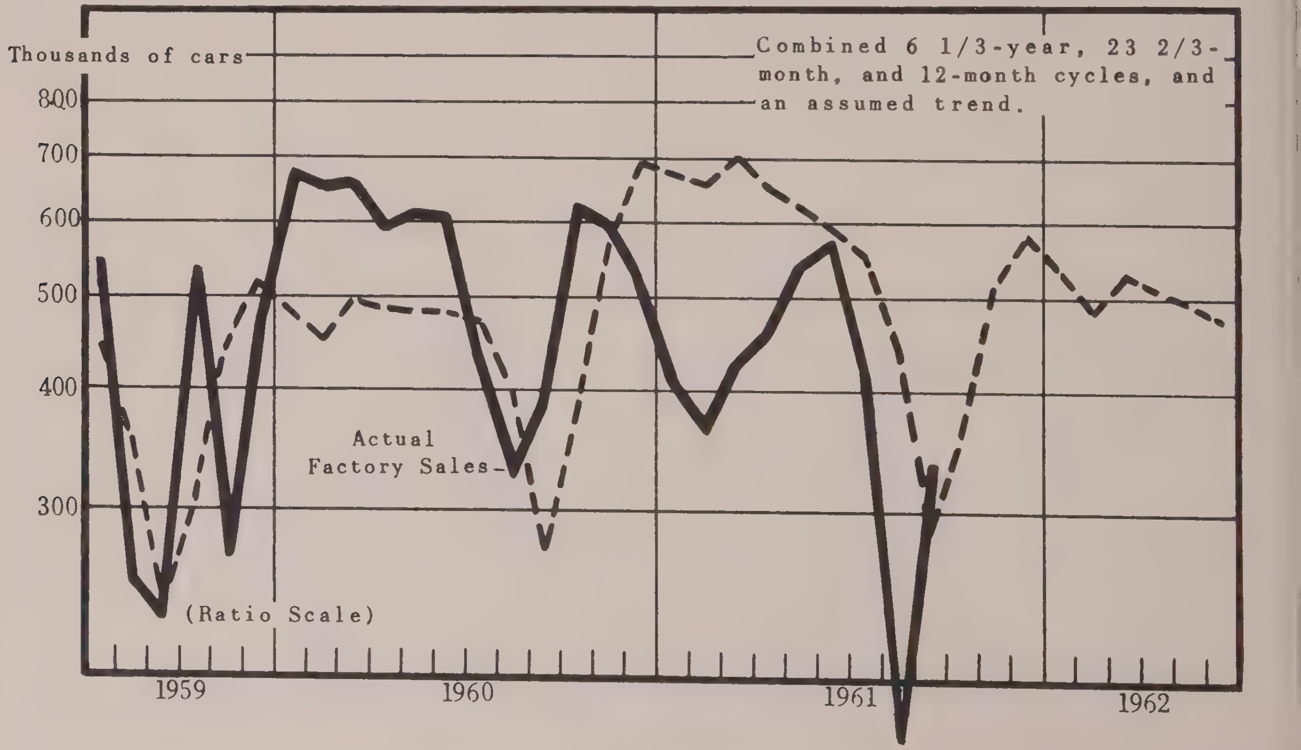
On the chart the broken line diagrams a 5.61-year cycle and an underlying trend combined. This cycle is now on the way up to a high at about December 1963. Over the period for which we have data this cycle has “worked” 73% of the time. That is, in 8 out of 11 up-legs of the cycle, the actual price of corn at the time of an ideal high has been abo the price of corn at the time of the previo ideal low.

The last plot on the chart is for Septembe when the price of corn averaged 110 cents pe bushel.



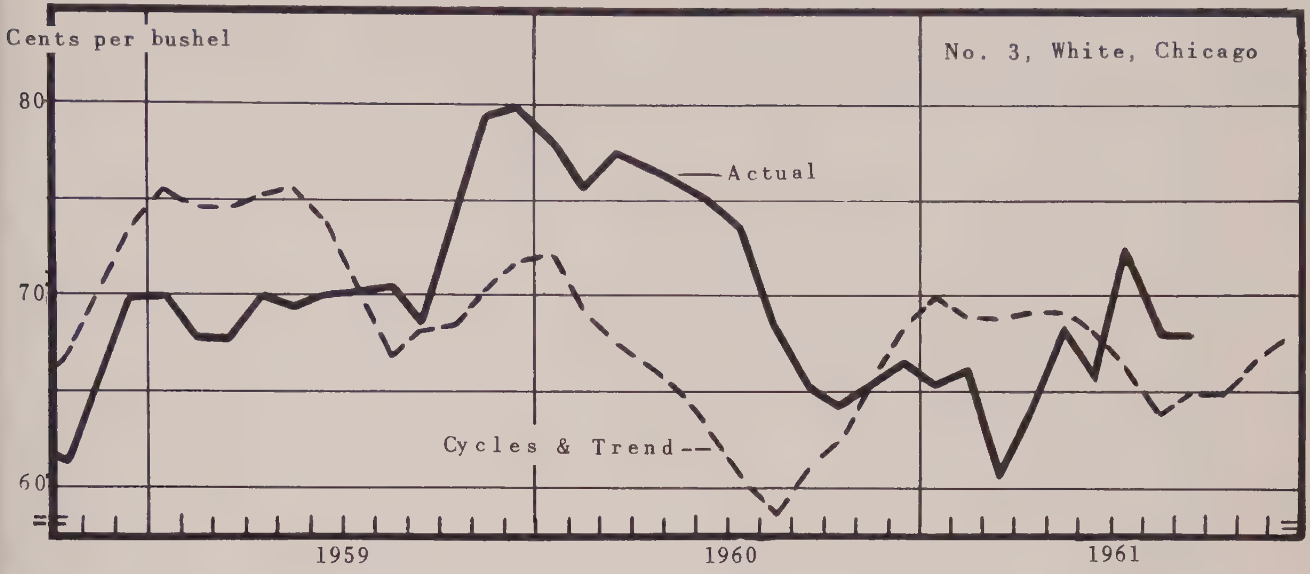
# PASSENGER CAR FACTORY SALES

The extent of the rise from the third quarter lows will be the first test of the cycles and trend we combined to get the broken line on the chart below. The level for the early part of 1962 should be thought of as the *cycl* benchmark for possible factory sales, and no as an absolute prediction.



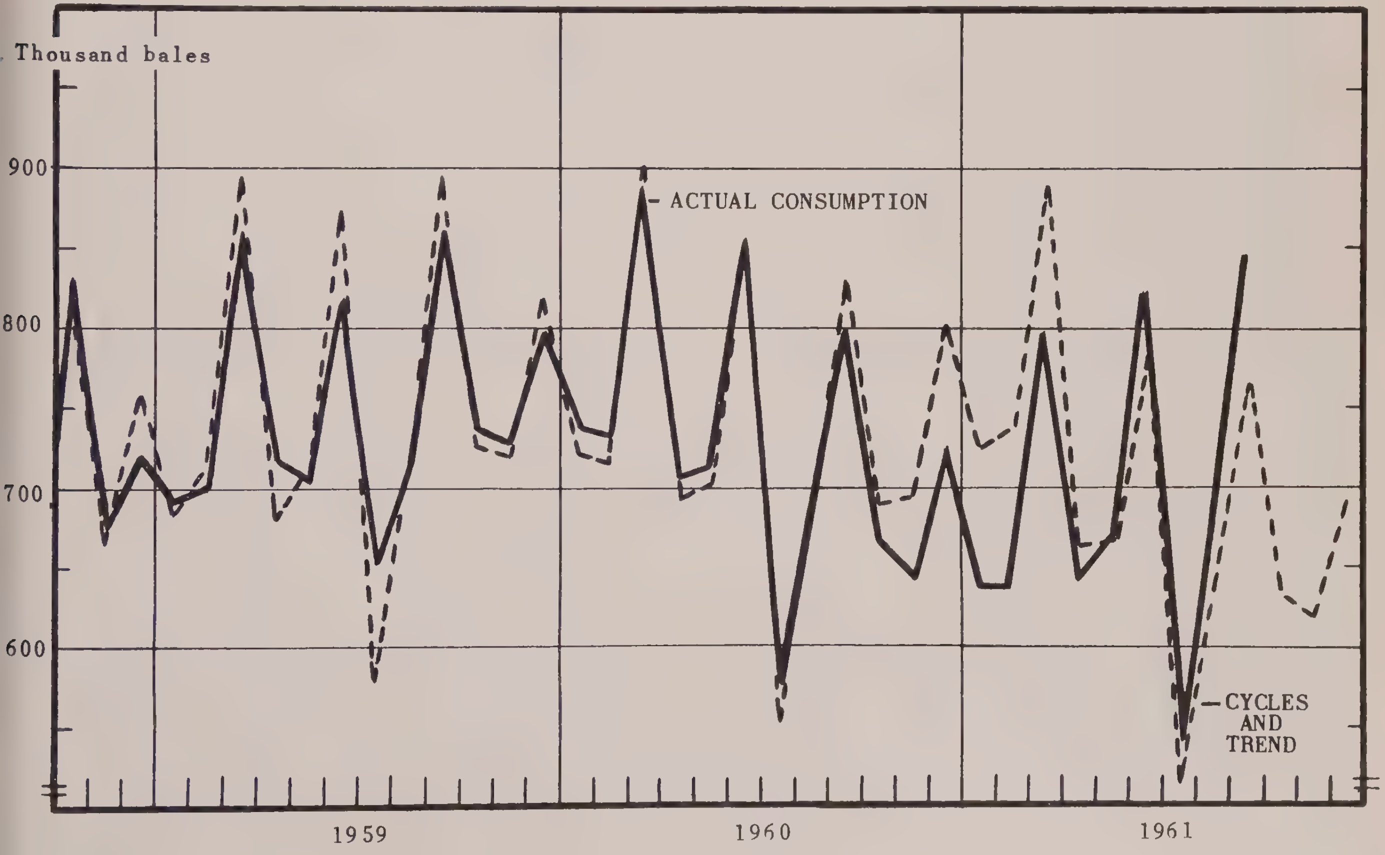
# OATS PRICES

The price of No. 3 white oats at Chicago during September averaged 68 cents per bushel. The cycles used in the broken line are 12-months and 26.64-months long.



# COTTON CONSUMPTION

The broken line on the chart is the combination of a 12-month cycle, a 23.75-month cycle, and an underlying trend. During the month of September cotton consumed totaled 847 thousand bales.



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# HE GEISINGER INDICATOR

## October 25, 1961

The Federal Reserve Board's seasonally adusted Index of Production went down from 12.8 in August to 111.6 in September.

This halt in the climb in the Industrial roduction Index in turn caused the First ifference Indicator for August to go down to .95.

However, the Geisinger Indicator went up gain. Based on the information available toay, the Geisinger Indicator for June (Februry 1962 when advanced) was 3.80. This level s the highest that the Geisinger Indicator as reached in over two years.

The Modified Geisinger Indicator for June (February 1962 when advanced) also went up. The value was 6.19.

The decline in the Index of Industrial Production should cause no alarm in view of the continued and even increasing strength of the Geisinger Indicator. If we are to believe the Geisinger Indicator which has been unfailingly accurate in the past, we are due for further increases in industrial production before the next decline.

E. R. Dewey

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## The recent figures:

| Month | F.R.B. Index § | Geisinger Indicator | First Difference Indicator | Modified Geisinger Indicator | Timing Advanced 8 Months |
|---|---|---|---|---|---|
| Jan-1961 | 102.3 | -2.20 | -1.08 | -3.28 | 1961-Sep |
| Feb | 102.1 | 0.40 | -0.49 | -0.09 | Oct |
| Mar | 102.6 | 2.60 | 0.48 | 3.08 | Nov |
| Apr | 105.6 | 3.60 | 1.59 | 5.19 | Dec |
| May | 108.3 | 3.40 | 2.33 | 5.73 | 1962-Jan |
| Jun | 110.4 | 3.80 | 2.39 | 6.19 | Feb |
| Jul | 112.1 | * | 1.83 | * | Mar |
| Aug | 112.8 | * | 0.95p | * | Apr |
| Sep | 111.6p | * | * | * | May |

§ - 1957 = 100, adjusted for seasonal variation
p - preliminary
* - not yet available

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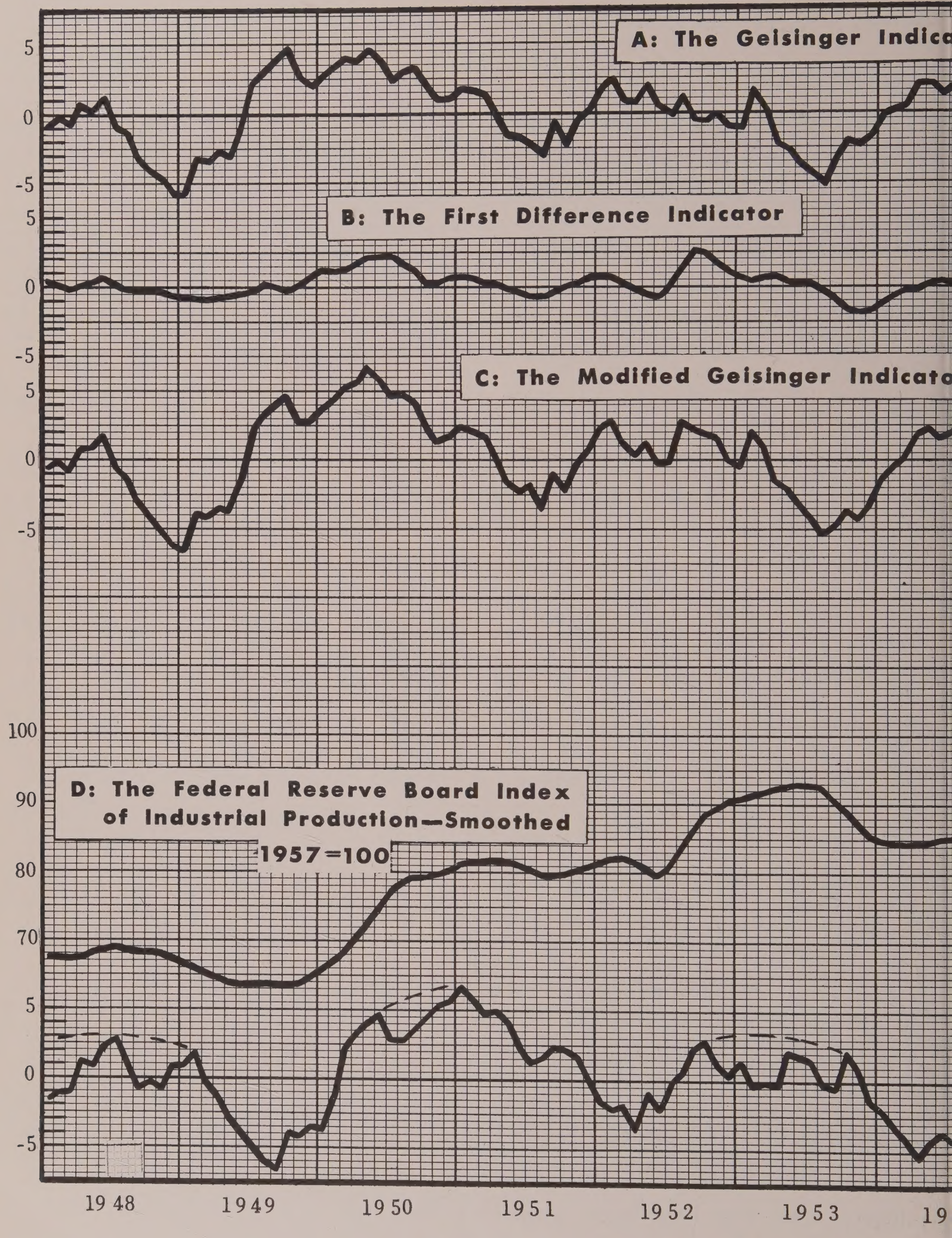
*For $5 a year extra members can get the Geisinger Indicator text and figures by first-class mail immediately after it is written. This service saves you the two weeks that it takes to print and mail Cycles, plus the two weeks it takes the Post Office to deliver it.*

## he chart: See the next two pages

# The Geisinger Indicator Compared To Indu



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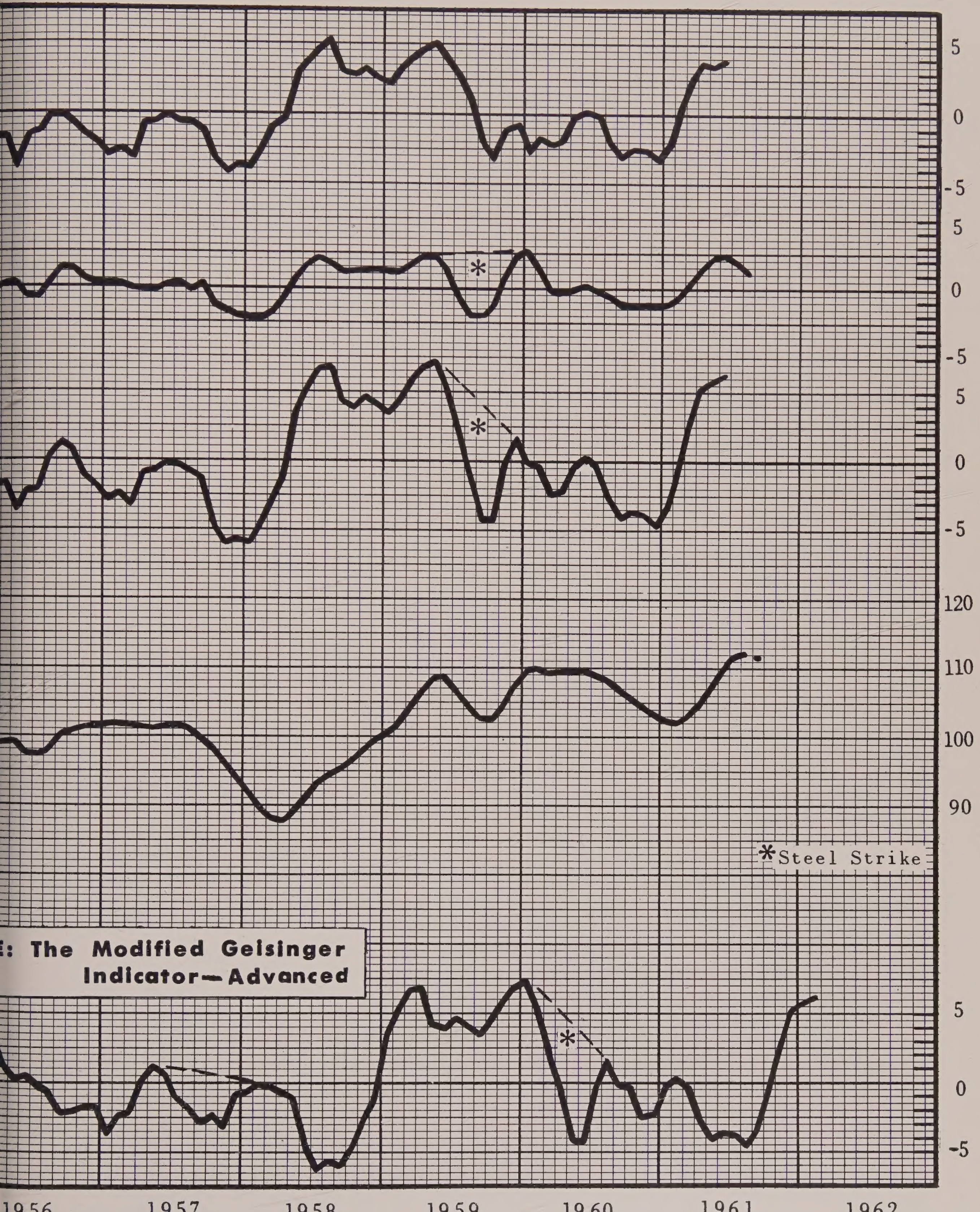

E: The Modified Geisinger Indicator—Advanced

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